Claims:

1. A method for enhancing launch and in-flight integrity of a reactive composite projectile, comprising the steps of:

providing a reactive composite material in a solid shape; and

encasing the solid shape in an encasement material that applies a compressive force to the solid shape.

2. A method according to claim 1 wherein said encasement material is tape and wherein said step of encasing comprises the steps of:

applying a tensile force to said tape; and

wrapping said tape about said solid shape while said tensile force is being applied.

3. A method according to claim 2 wherein said tape is made from a material that chemically reacts with the reactive composite material when the solid shape strikes a target.

4. A method according to claim 2 wherein said tape is made from a material that is inert with respect to the reactive composite material when the solid shape strikes a target.

5. A method according to claim 1 wherein said encasement material is a polymeric material and said step of encasing comprises the steps of:

coating the solid shape with a liquified form of the polymeric material; and

curing the liquified form of the polymeric material so-coated on the solid shape wherein the polymeric material shrinks to thereby apply said compressive force to the solid shape.

6. A method according to claim 1 wherein said encasement material is a polymeric material and said step of encasing comprises the steps of:

extruding a flexible solid form of the polymeric material over the solid shape; and

curing the flexible solid form of the polymeric material so-extruded over the solid shape wherein the polymeric material shrinks to thereby apply said compressive force to the solid shape.

7. A reactive composite projectile, comprising:

a reactive composite material in a solid shape; and

an encasement material applied to and surrounding said solid shape for exerting compressive forces thereon.

8. A reactive composite projectile as in claim 7 wherein said encasement material comprises tape wrapped under tension onto said solid shape.

9. A reactive composite projectile as in claim 8 wherein said tape is made from a material that chemically reacts with said reactive composite material when the solid shape strikes a target.

10. A reactive composite projectile as in claim 8 wherein said tape is made from a material that is inert with respect to said reactive composite material when the solid shape strikes a target.

11. A reactive composite projectile as in claim 7 wherein said encasement material is a polymeric material shrink cured onto said solid shape.

12. A reactive composite projectile as in claim 7 further comprising an elongate structure positioned in said solid shape, said elongate structure made from a material having a mass density that is approximately 2 to 10 times said mass density of said reactive composite material.

13. A reactive composite projectile as in claim 12 wherein said elongate structure comprises a plurality of fins extending radially outward from an elongate core.

14. A reactive composite projectile as in claim 12 wherein said elongate structure comprises a one-piece structure that defines a plurality of elongate fins extending radially outward from an elongate core.

15. A reactive composite projectile as in claim 12 wherein said elongate structure comprises an assembly that, when assembled, defines a plurality of elongate fins extending radially outward from an elongate core.

16. A reactive composite projectile as in claim 12 wherein said elongate structure comprises an externally threaded rod.

17. A reactive composite projectile as in claim 12 wherein said elongate structure comprises a plurality of elongate rods.

18. A reactive composite projectile as in claim 17 wherein said plurality of elongate rods are bundled together.

19. A reactive composite projectile as in claim 12 wherein said elongate structure is made from a material selected from the group consisting of metals and ceramics.

20. A reactive composite projectile as in claim 7 wherein said solid shape comprises a cylinder.

21. A reactive composite projectile as in claim 7 wherein said solid shape comprises a sphere.

22. A reactive composite projectile as in claim 7 wherein said solid shape comprises a cube.

23. A reactive composite projectile, comprising:

a reactive composite material in a solid shape, said reactive composite material having a mass density; and

an elongate structure positioned in said solid shape, said elongate structure made from a material having a mass density that is approximately 2 to 10 times said mass density of said reactive composite material.

24. A reactive composite projectile as in claim 23 wherein said elongate structure comprises a plurality of fins extending radially outward from an elongate core.

25. A reactive composite projectile as in claim 23 wherein said elongate structure comprises a one-piece structure that defines a plurality of elongate fins extending radially outward from an elongate core.

26. A reactive composite projectile as in claim 23 wherein said elongate structure comprises an assembly that, when assembled, defines a plurality of elongate fins extending radially outward from an elongate core.

27. A reactive composite projectile as in claim 23 wherein said elongate structure comprises an externally threaded rod.

28. A reactive composite projectile as in claim 23 wherein said elongate structure comprises a plurality of elongate rods.

29. A reactive composite projectile as in claim 28 wherein said plurality of elongate rods are bundled together.

30. A reactive composite projectile as in claim 23 wherein said solid shape comprises a cylinder.

31. A reactive composite projectile as in claim 23 wherein said solid shape comprises a sphere.

32. A reactive composite projectile as in claim 23 wherein said solid shape comprises a cube.

33. A reactive composite projectile as in claim 23 wherein said elongate structure is made from a material selected from the group consisting of metals and ceramics.

34. A reactive composite projectile, comprising:

a reactive composite material in a solid shape, said reactive composite material having a mass density; and

an elongate structure positioned in a central portion of said solid shape, said elongate structure made from a material having a mass density that is approximately 2 to 10 times said mass density of said reactive composite material, said elongate structure having an elongate core with fin-like protuberances extending radially outward from said elongate core into said solid shape.

35. A reactive composite projectile as in claim 34 wherein said elongate structure comprises a one-piece structure.

36. A reactive composite projectile as in claim 34 wherein said elongate structure comprises a multiple-piece assembly.

37. A reactive composite projectile as in claim 34 wherein said fin-like protuberances extend longitudinally along said elongate core.

38. A reactive composite projectile as in claim 34 wherein said fin-like protuberances comprise threads.

39. A reactive composite projectile as in claim 34 wherein said solid shape comprises a cylinder.

40. A reactive composite projectile as in claim 34 wherein said solid shape comprises a sphere.

41. A reactive composite projectile as in claim 34 wherein said solid shape comprises a cube.

42. A reactive composite projectile as in claim 34 further comprising an encasement material applied to and surrounding said solid shape for exerting compressive forces thereon.

43. A reactive composite projectile as in claim 42 wherein said encasement material comprises tape wrapped under tension onto said solid shape.

44. A reactive composite projectile as in claim 43 wherein said tape is made from a material that chemically reacts with said reactive composite material when the solid shape strikes a target.

45. A reactive composite projectile as in claim 43 wherein said tape is made from a material that is inert with respect to said reactive composite material when the solid shape strikes a target.

46. A reactive composite projectile as in claim 42 wherein said encasement material is a polymeric material shrink cured onto said solid shape.

47. A reactive composite projectile as in claim 34 wherein said elongate structure is made from a material selected from the group consisting of metals and ceramics.